MITIGATION AND ADAPTATION OVERVIEW

Despite significant differences between mitigation and adaptation, there is more common ground between them than might at first be obvious: some of the major actions that local governments may be taking to mitigate future climate change also have adaptation benefits. The tables below summarize how climate action measures can work synergistically to achieve greenhouse gas reductions while at the same time making communities more resilient to expected climate change impacts.

Energy	
Mitigation	**Adaptation**
Reduce emissions by expanding use of renewable sources	Reduce vulnerability to widespread power grid outages by encouraging distributed generation from multiple renewable sources (solar, wind, biogas, landfill methane, etc.)
Reduce emissions by improving efficiency of energy and water delivery systems	Reduce potential for grid overload and failure by decreasing demand.
Green Building Strategies	
Mitigation	**Adaptation**
Reduce emissions by curbing energy use through greater efficiency	Lower energy use will create less demand on the grid during extreme events such as heat waves, decreasing the likelihood of blackouts
Adopt or encourage LEED building standards for commercial, residential, retrofit and municipal projects	Building standards could include greater resistance to high winds, flooding, etc.
Implement a weatherization program	Better insulated buildings that rely on day lighting and natural ventilation will be more functional and comfortable during power disruptions
Food Production and Distribution	
Mitigation	**Adaptation**
Reduce emissions by encouraging local food production through local agriculture, community gardening, etc. to decrease the number of miles food must be transported	Reduce reliance on centralized food system where commodity production is concentrated in a few locations that may be vulnerable to climate disruptions such as storm damage, pest outbreaks, etc.

TABLE 2. TYPES OF ADAPTATION

Type of Adaptation	Example	Level of Involvement
ANTICIPATORY	Diversifying rainfall removal by promoting rainwater storage, permeable surfaces and drainage pipelines	Community and personal
REACTIVE	Expanding drainage infrastructure as a major way to accommodate heavy precipitation events	Community
SUPPLY-SIDE	Building water reservoirs to collect rainwater	Community and production systems
DEMAND-SIDE	Water-metering to support water conservation	Community and personal
TOP-DOWN	Changing national standards, such as building codes, to address changes in climate	National
BOTTOM-UP	Developing community by-laws to regulate building construction, such as increasing habitable space, and increasing areas of permeable surfaces to minimize pressure on sewage system and flooding	Community and productions systems
AUTONOMOUS	Farmer's decision to change timing and species planted based on observed weather changes	Individual and community
NON-AUTONOMOUS (PLANNED)	Changes in water resource allocation to ensure biodiversity protection, agriculture and drinking water supplies	Community, production systems and individual

Risk number	Risk title and rating	Now	2030	2070
H1	Increased heat stress related death / illness among at risk population groups	**8**	**8**	**9**
H2	Passengers become stranded as trains and trams to the City of Melbourne are delayed / cancelled in hot weather	**8**	**8**	**9**
H3	Blackout	**7**	**6**	**6**
H4	Increased violence / anti-social behaviour causing increased public nuisance and hospital admissions	**7**	**7**	**7**
H5	Increased prevalence of food borne disease	6	6	6
H6	Increased maintenance costs of assets and infrastructure	**7**	**7**	6
H7	Disruption to any outdoor event due to hot weather	6	6	**7**
H8	Reduced public and social use of space during heat waves	6	6	**7**
H9	Business interruption due to electricity blackout	6	5	5
H10	Heat stress related illness among outdoor City of Melbourne workers. This is caused by an increased number of hot days, and becomes especially exacerbated during hot spells.	6	6	6
H11	Respiratory illness and social disruption due to bushfire-related poor air quality	5	6	6
H12	Train and tram derailments / accidents result in injuries and major disruptions	5	5	6
H13	Increased closure of schools due to poor air quality	5	5	5
H14	Future liability and reputation damage relating to construction of dwellings or infrastructure unsuited to projected climatic conditions	3	6	**8**